What Do 9,000 Brand Lift Studies Teach Us

About Attention & Memory?

Contents

Executive Summary

The industry has been paying attention to attention metrics like never before. The IAB and WARC have recently released guides for brands and agencies that are trying to understand the multitude of different solutions. One thing is for certain: by measuring and optimising campaigns with attention metrics, advertisers can go beyond viewability and drive better performance and outcomes while eliminating low-attention domains and ad units.

But how can attention metrics be used to build a brand?

This year, there has been a lot of discussion about whether advertisers have over-indexed on lower funnel metrics - focusing on return on ad spend at the campaign level, but not building a real relationship at the customer level. To tackle this challenge, Havas, Lumen, and Brand Metrics decided to team up to conduct a ground-breaking analysis of how attention to advertising can influence awareness, consideration, preference, and action intent based on viewability, frequency, attention, and brand metrics data across billions of attentive impressions, the largest eye-tracking dataset in the world, and over 9,000 brand lift studies.

In this first-ever study, we found:

- Attention & brand outcomes are closely correlated
- Attention time is the best indicator of brand preference and intent metrics
- Aggregate attention time is crucial to brand campaigns
- Frequency drives attentive reach and aggregate attention time
- Different attention strategies can influence different brand outcomes

Read about how we launched the study and what we found in detail in the following pages:

The Challenge

We know that attention drives better performance for ad campaigns. But how can advertisers get better brand outcomes with attention metrics?

The relationship between attention and performance advertising is well understood. Ads need to get attention to work. Unseen is unsold.

This relationship is easy to establish because performance outcomes data is easy to report. Impression-level viewability can be collected, and predictive models of attention applied to produce impression-level attention estimates. This data can then be matched to granular outcomes data – clicks, conversions, on-site actions – to understand the relationship between estimated attention and actual results.

The largest published article on the topic - a meta-analysis of Lumen's attention and outcomes data across hundreds of millions of ads for three blue chip clients, conducted by PwC in 2022 - showed a strong and consistent relationship between attention and a range of performance outcomes that handily beat standard viewability metrics. There is a big difference between having the 'opportunity to see' an ad and actually looking at it, and an even bigger difference in outcomes between ads that are merely viewable and ones that achieve significant levels of attention.

Attention outperforms viewability at predicting clicks and conversions

Source: PWC report

Advertisers do not live on performance metrics alone.

Often, the avowed intent of advertising is to increase brand metrics such as awareness, whether the brand is in a customer's consideration set, brand preference within that set, or intention to purchase. Collecting data on these objectives is less easy, but they are no less important to advertisers.

This has led Havas to ask the following questions:

01

What is the relationship between attention and brand outcomes?

02

What are the minimum attention levels required to achieve key brand objectives:

- Awareness
- Consideration
- Preference
- Purchase intent

03

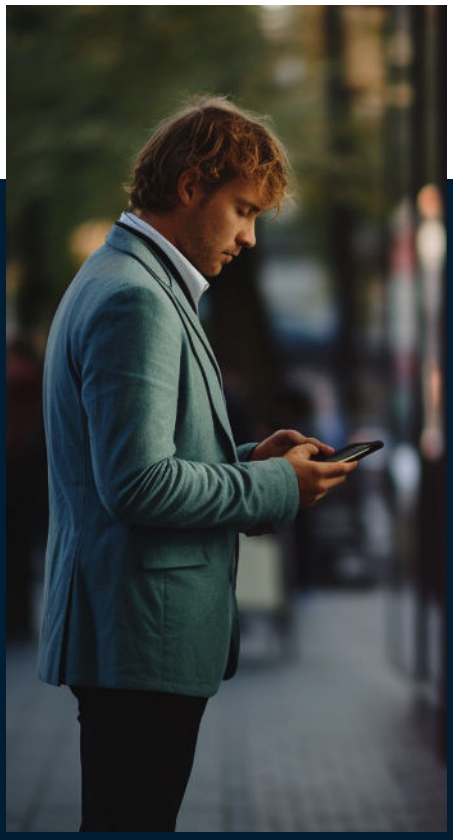
How can we turn this insight into action, embedding what we have learned into planning tools, execution strategies and campaign measurement?

The Methodology

Lumen & Brand Metrics built a unique methodology based on viewability, frequency, attention metrics, and scalable brand lift studies to understand how different levels of attention impacted brand outcomes.

To be successful, the teams needed to combine two types of data, consistently and at scale:

- **Impression-level viewability and frequency data:** this is required to calculate the estimated attention for each ad and give an aggregated estimate of the total attention a respondent has given to a digital campaign.
- **Consistent brand lift response data, at scale:** this is needed to run meta-analyses across multiple campaigns, rather than treating each campaign individually.



Most brand lift study (BLS) providers can't produce either of these datasets.

Most BLS providers use a 1x1 pixel to tag ads that are part of their studies. This records whether or not an ad reached a user's device, but does not record the viewability characteristics of the ad - making reliable attention estimates hard to produce.

Most BLS providers, in an effort to be as flexible and responsive to client needs as possible, enable advertisers to deploy bespoke questionnaires as part of their brand lift study process. However, this makes aggregating data across studies difficult, as the data from one study is often slightly different from that collected for another study.

Furthermore, most BLS providers have a minimum campaign size they can measure, often related to panel-based restrictions, which means that many smaller campaigns are not being measured. This in turn means understandings are just based on large campaigns and large brands.

This created a dilemma:

How can we understand the relationship between predicted attention and brand metrics at scale if we don't have impression-level viewability data within campaigns and data consistency between campaigns?

One way of solving the problem would be to start from scratch:

Collecting fresh viewability data from upcoming campaigns that have a brand lift study appended to them and deploy a consistent questionnaire across all future studies. Over time, we would develop a large and consistent dataset for us to analyse. But the organisation, cooperation, time and money required for this approach make it very difficult to achieve efficiently.

So we found a better way.

What is an attention-based Brand Lift Study?

In a typical brand lift study, advertisers set up two test cells: a 'test' group and a 'control' group.

The test group are exposed to an ad or campaign; following the campaign, they are sent a questionnaire to evaluate brand awareness, purchase intent, and/or ad recall.

A control group of similar individuals is also recruited, and not exposed to the campaign. They complete the same questionnaire.

The difference between the responses of the control and the test groups is the 'brand lift'.

Conducting a successful attention-based brand lift study requires a more sophisticated approach, encompassing:

1. The viewability characteristics of the ad or ads the 'test' respondents were exposed to, so that the attention levels to each impression can be estimated.
2. The recall or response data for each respondent, tied to the viewability and frequency data for the ads.

With this data, you can then understand differences within the test group to understand the relationship between increases in predicted attention and increases in 'brand lift'.

About Brand Metrics

brand metrics

LUMEN

The brand lift science behind how Brand Metrics generates standardized surveys via first-party data and publisher integrations.

Most BLS providers are ‘panel-based’. They recruit a panel of potential respondents and install tracking software on their phones and computers. When a client’s ad is served to a respondent’s device, a signal is sent back to the BLS provider’s database, and they become eligible to be sent a brand lift questionnaire as part of the ‘test’ cell. If they do not receive the ad, then they may be eligible to take part as a member of the ‘control’ group. .

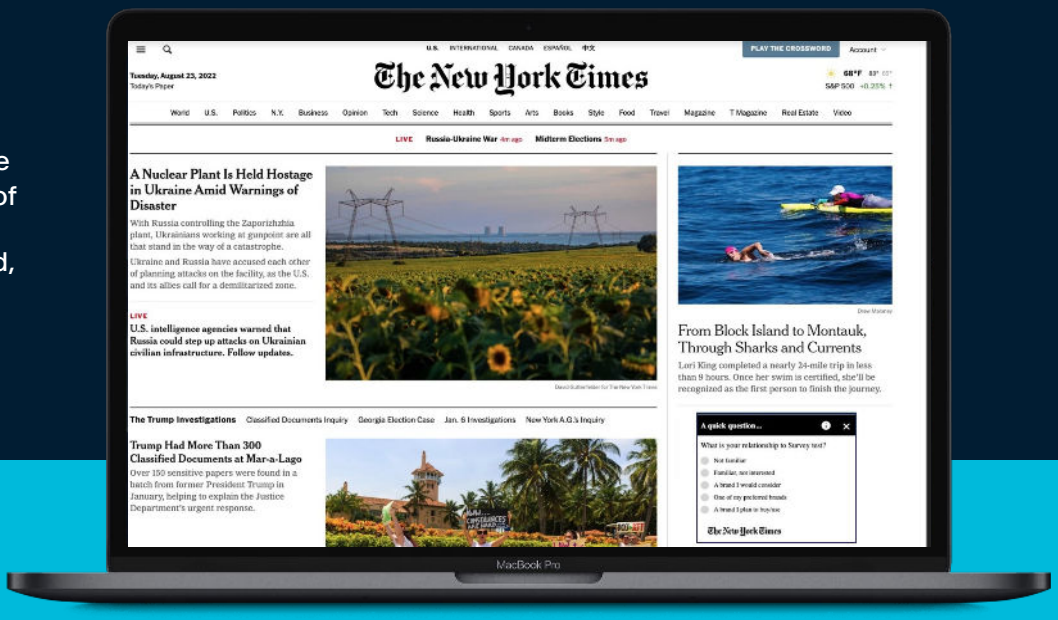
We needed a more consistent approach.

Founded in 2018, Brand Metrics uses a different, more scalable approach. Instead of recruiting from a panel of respondents, they integrate directly with publishers and survey respondents ‘in the wild’, on the site where they were originally exposed to the advertising.

This automated approach allows precise retargeting of people exposed to each campaign, capturing valuable data around their frequency of exposure and the length of time they have been exposed, permiting a more sophisticated level of brand lift calculation.

Having captured exposure information, the technology then retargets a survey to a sub-set of exposed visitors when they next visit the publisher’s site, with the survey being delivered via ad units or as a fly-over.

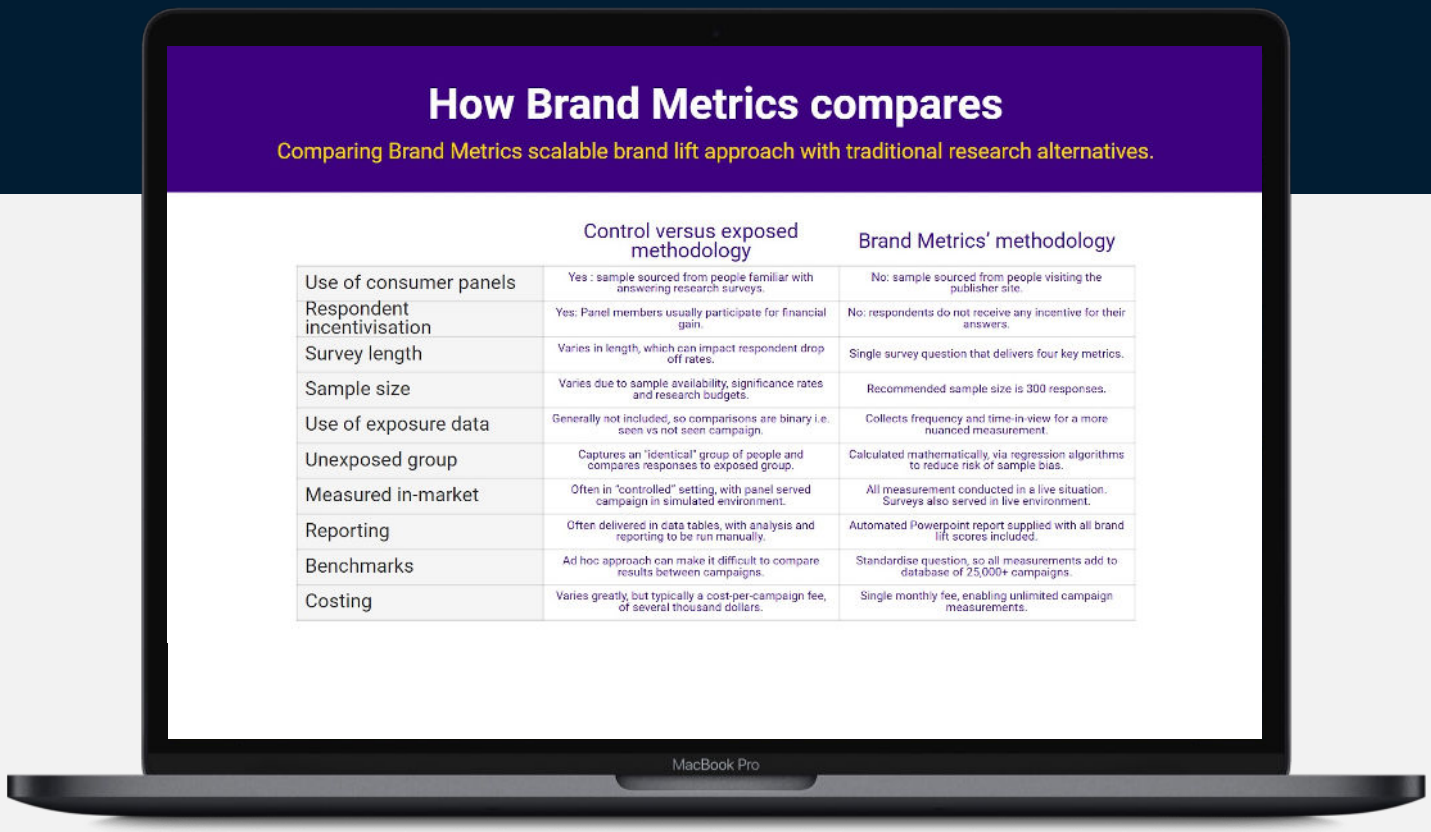
The survey question mirrors the different stages of the brand funnel and follows a consistent structure to make each survey comparable. It also allows the capture of four metrics from a single survey question, thereby making it efficient to set up and easy to answer.



For Instance:

- How do you feel about Brand XX?
- I'm familiar, but not interested
- It is a preferred brand in XX category
- I'm not familiar with Brand XX
- It is a brand I would consider
- I intend to purchase / use Brand XX in future

Brand Metrics' advantages:



	Control versus exposed methodology	Brand Metrics' methodology
Use of consumer panels	Yes : sample sourced from people familiar with answering research surveys.	No: sample sourced from people visiting the publisher site.
Respondent incentivisation	Yes: Panel members usually participate for financial gain.	No: respondents do not receive any incentive for their answers.
Survey length	Varies in length, which can impact respondent drop off rates.	Single survey question that delivers four key metrics.
Sample size	Varies due to sample availability, significance rates and research budgets.	Recommended sample size is 300 responses.
Use of exposure data	Generally not included, so comparisons are binary i.e. seen vs not seen campaign.	Collects frequency and time-in-view for a more nuanced measurement.
Unexposed group	Captures an "identical" group of people and compares responses to exposed group.	Calculated mathematically, via regression algorithms to reduce risk of sample bias.
Measured in-market	Often in "controlled" setting, with panel served campaign in simulated environment.	All measurement conducted in a live situation. Surveys also served in live environment.
Reporting	Often delivered in data tables, with analysis and reporting to be run manually.	Automated Powerpoint report supplied with all brand lift scores included.
Benchmarks	Ad hoc approach can make it difficult to compare results between campaigns.	Standardise question, so all measurements add to database of 25,000+ campaigns.
Costing	Varies greatly, but typically a cost-per-campaign fee, of several thousand dollars.	Single monthly fee, enabling unlimited campaign measurements.

About Lumen

Why Lumen's attention metrics have led the way for 10+ years in turning attention into action in a scalable, accurate, and transparent way.

Lumen is an attention measurement and optimisation company founded in 2013. Over the last 11 years, Lumen has leveraged a patented eye-tracking platform to collect eye-tracking data from hundreds of thousands of respondents across thousands of websites and apps in 37 countries and analysed attention across billions of impressions.

Visual Attention Data

- Largest eye-tracking dataset in the world covering 30+ countries
- 650,000+ real eye tracking sessions for baseline gaze data
- Always-on eye tracking panel to continuously update models
- Custom eye tracking panels to generate custom AI models for rich media and offline ad experience

Attentive Impressions

- 20B+ desktop and mobile impressions
- 300B+ social impressions
- Tagged for real-time attention measurement for live campaigns

Attention Signals

- Real-time contextual signals measured to estimate visual attention at scale
- Dynamic factors such as scroll time viewable time, on-screen movement, device, ad size, and more for attention score

From this dataset, they can observe consistent patterns in the relationship between viewability factors and how likely people are to notice advertising:

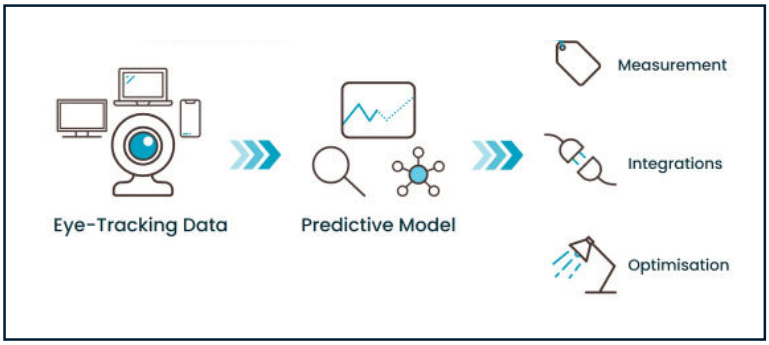
Big ads almost always get more attention than small ads, video ads almost always get more attention than static ads, ads that are on screen for 10 seconds almost always get more attention than ads that are only on screen for 1 second, and so on.

The key factors are:

- Size of ad
- Viewable time
- Ad format (inc. video vs static advertising)
- Skippability
- % of screen real estate the ad takes up
- Scroll velocity
- Audio
- Domain the ad appears on

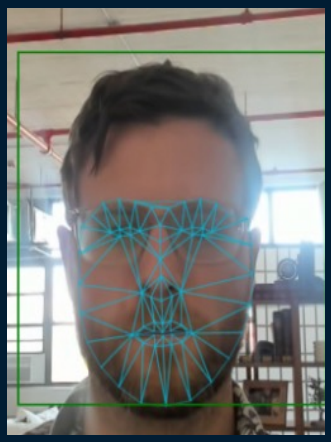
Lumen can weight and combine these factors to predict likely levels of attention based on viewability data collected via a javascript tag.

This dramatically improves the scalability of attention insight, allowing brands and agencies to gain attention estimates of live and historic campaigns without having to collect fresh eye tracking data. It also enables the matching of impression-level attention predictions with impression-level outcomes data - such as that provided by Brand Metrics.



The Approach

Lumen uses eye-tracking software to collect attention data on a wide variety of digital and traditional media.



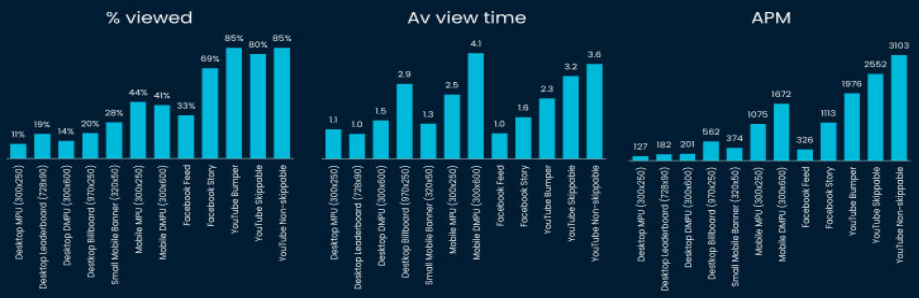
The first type of data we collect is on the percentage chance that an ad will be viewed at all. This shows that there can often be a large discrepancy between ads that are 'technically' viewable to MRC standards and actual attention. There can be a big difference between having an 'opportunity to see' an ad (i.e. viewability) and actually looking at that ad (i.e. attention). And there is also a big difference in how noticeable ads are on different devices, formats and platforms.

However, it is also important to consider how long people look at advertising. Lumen also collects data on the average view time of ads of different sizes and types.

These two types of data (% chance of viewing and average view time) can be combined to create a composite metric, attentive seconds per 1000 impressions (= % viewing x av. view time x 1000 imp), which enables advertisers to understand how much attention they can expect from ads on different devices, formats and platforms.

These averages are useful in themselves, but conceal as much as they reveal.

Lumen attention norms

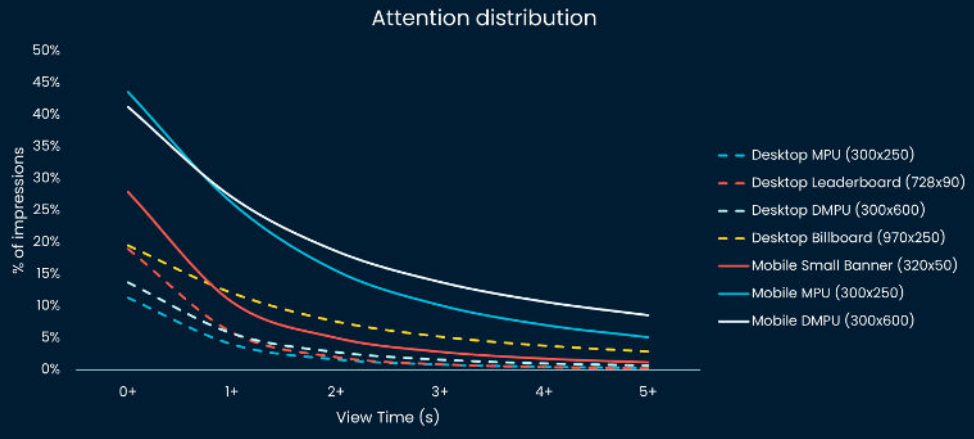


Within each media and format there is a wide distribution of attention: if a format gets on average 2 seconds of attention, this average is made up of a wide variety of different view times.

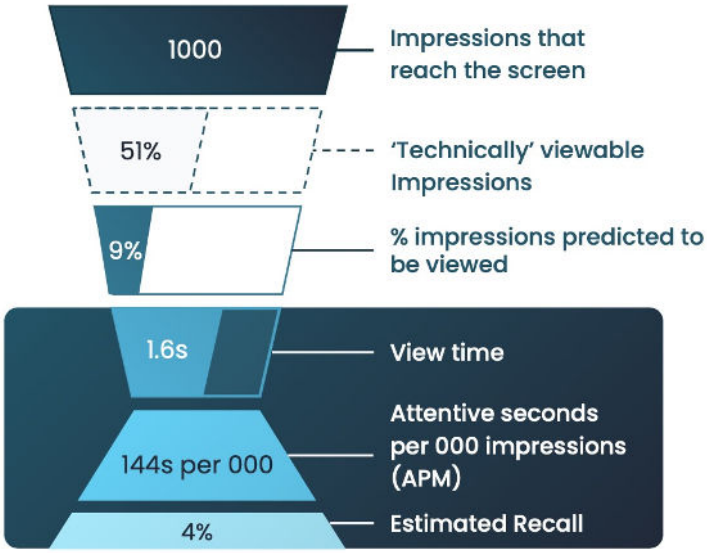
Many people will have only glanced at an ad for less than a second, whereas a few others may have engaged more deeply for four or five seconds.

This distribution of attention can be represented as a curve, which visualises the proportion of ads within a format that achieve a specified view time. For instance, in the chart below, just 2% of desktop MPUs achieve 2 seconds of attention, whereas 16% of mobile MPUs achieve the same view time.

Lumen attention distribution



This is important because, in principle, it enables brands to construct attention-adjusted reach curves, that not only helps brands understand how many people have looked at their campaign, but also how many have looked at each impression for a specific amount of time.



By applying Lumen's attention metrics across Brand Metric's dataset, the team started to identify how attention levels affect brand outcomes.

Lumen measures four primary attention metrics:

- % Viewed: The percentage of ads estimated to have been seen
- View Time: The amount of time that each ad was viewed
- Attentive Seconds Per 1000 Impressions (APM): The amount of attention generated overall
- Attentive Cost Per 1000 Impressions (aCPM): The cost of attention based on total attention generated

A unique dataset

How Brand Metrics and Lumen combined viewability, frequency, attention, and Brand Metrics' datasets to uncover new findings on the impact of attention, memory, and brand.

The first step in our analysis involved combining Lumen predictive attention models and Brand Metrics' data in a way that respects user privacy and publisher partners. From there, the team took an attention-first approach.

01

Lumen shared attention scores for all the ad units where respondents have been exposed to the campaigns, with scores broken out by domain, device, creative size and for different levels of viewable time.

02

Brand Metrics applied these attention scores to each respondent's history of ad exposure

03

The Lumen attention model estimated the chance that each ad was actually viewed and the average view time to each ad impression in Brand Metrics' dataset.

Once we assigned attention scores to each ad impression, we aggregated the attention scores at a user level rather than the impression level, as below.

Aggregating attention across multiple impressions for a single user

Where p_i is the probability of viewing each impression i, delivered to respondent, r, and ti is the expected viewing time of each viewed impression:

$$Overall\ probability\ that\ respondent\ r\ views\ the\ campaign\ = 1 - \prod (1 - p_i)$$

$$Overall\ expected\ viewing\ time\ for\ respondent\ r\ = \sum p_i t_i$$

The resulting data set is an extremely rich resource to understand the relationship between attention and brand outcomes. The data set currently includes 9089 campaigns across 1,879,764 respondents who have been exposed to 5,618,088 viewable ad impressions. The majority of the data was collected in the UK, but the dataset also includes some studies from the US, Singapore and other markets.

To enhance our analysis, Brand Metrics also have classified campaigns into different sectors and can segment campaigns by the level of category importance and the length of the purchase cycle.

In addition to the data on those surveyed in the study, there is also data on the overall campaign delivery in terms of the number of impressions, reach and frequency.

Currently we have focused on creating a dataset for display advertising. Brand Metrics' data also includes video campaigns, but in our initial analysis we have focused on display for simplicity and because this is where the largest amount of Brand Metrics' data is available. In the future we will expand the analysis to include video campaigns.

In addition to the overall analysis, the dataset can be segmented based on category, length of purchase cycle, campaign delivery, number of impressions, reach, and frequency.

Analytical approach

The data set we have created together could be approached with many different analytical methods.

At this stage, the analysis we have done primarily involves summarising and visualising the key relationships between attention and outcomes. In the future, we will be applying more advanced multivariate modeling techniques to more closely control for other factors, but this early analysis is more descriptive and graphical.

As with any statistical analysis of advertising effectiveness, the challenge is always to show the incremental effect of advertising. To achieve this, Brand Lift is often calculated by comparing the data to an exposed control group.

However, Brand Metrics' methodology does not involve a control group, but rather makes use of variation at different levels of ad exposure to predict an unexposed baseline. In this analysis however, we will simply compare all results relative to the campaign average for users at different levels of attention. This means the results shown below are transparent for the reader, without any modeling involved.

Note: The initial dataset is based on display advertising. In the future, the dataset will be expanded to include video campaigns.

Key learnings

So what did our analysis of 9K campaigns, 1.8 million respondents and 5.6 million impressions reveal?

Here are the initial key findings:

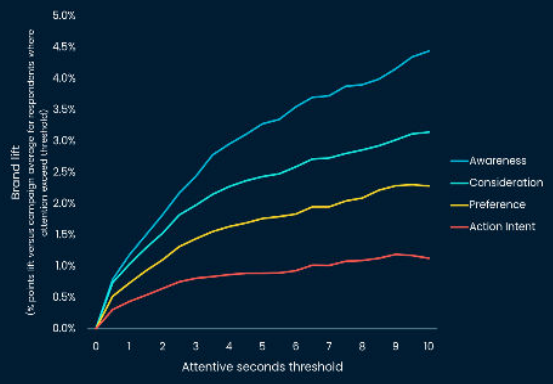
01

Attention and outcomes are closely correlated

The analysis shows that there is a clear relationship between attention and brand outcomes: in general, more attention leads to better outcomes.

This relationship holds true for all of the four measures captured by Brand Metrics.

Attention vs Brand Lift



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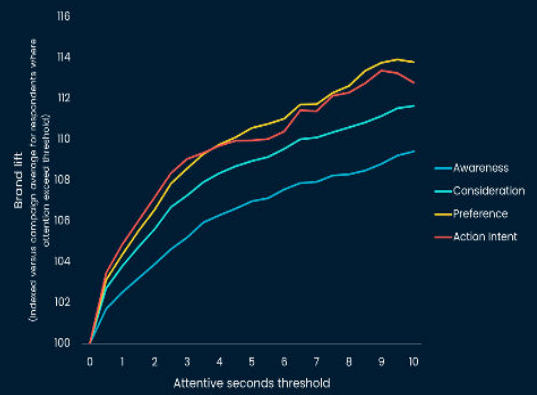
Specifically, our findings showed that the longer a participant looked at an ad according to Lumen's attention model, there was a significant increase in awareness, consideration, preference, and action intent.

02

Impact of increased attention time is greatest for preference and purchase intent metrics

The longer a participant looked at an ad, the more likely the attention score would predict high scores for brand preference and action intent. While attention time has a larger absolute impact on top-of-mind metrics, the biggest percentage increases are seen in 'lower funnel' brand lift measures.

Attention vs Brand Lift (Indexed)



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03

Aggregate attention time is a crucial variable

It is important to note that the charts above are for aggregate attention time across multiple ad impressions. As the 'attention distribution' charts above demonstrated, it is extremely rare for a single display ad, on either mobile or desktop, to generate 4 or 5 seconds of attention.

However, thanks to the user-level viewability data obtained from Brand Metrics, we are able to calculate the aggregate viewable time, and therefore estimate the aggregate attention time, for multiple impressions.

It is this aggregate attention time that drives the results we see above.

04

Frequency drives attentive reach and aggregate attention time

Given that most display ads are easy to ignore, it is important to give people multiple chances to view an ad. This is why brands need to optimise for ad frequency to reach the right attention threshold to drive outcomes.

To create the aggregate attention required to drive outcomes, brands need to buy campaigns with sufficient ad frequency.

Increases in frequency have at least two effects.

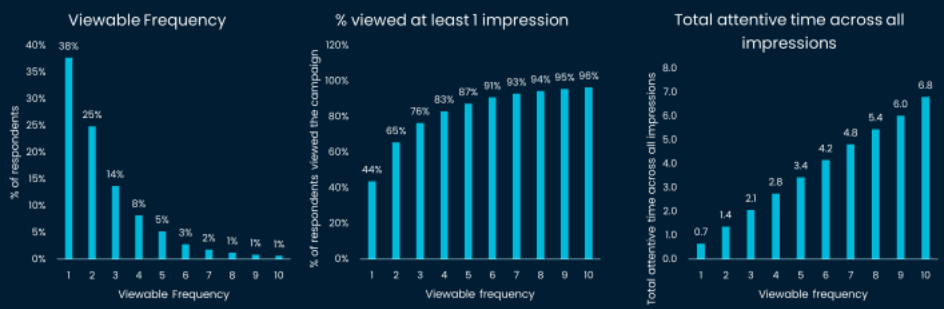
- Firstly, increasing frequency increases attentive reach. Given that most display ads are easy to ignore, it is important to give people multiple chances to view an ad. Even after 10 ads have been exposed to a reader, there is still a (small) chance that they will not have looked at any of them.
- Secondly, given that many of the ads will get looked at, each exposure generates more attention time, which gradually adds up to become a significant amount of engagement.

A single ad may get less than a second of attention, but over the course of 10 exposures to display ads, the aggregate amount of attention to the creative as a whole will be close to 7 seconds.

As the aggregate attention data shown above demonstrates, it is important to analyse the data not as atomistic instances of engagement with an individual ad, but as multiple opportunities to create aggregate attention to a creative.

Attention time is important. But so is attention over time.

Frequency = aggregate time



05

Multiple impressions of 'long enough' attention drive better results than single impressions of 'sustained' attention

Aggregate attention time is the key determinant of brand lift. But it matters how this aggregate is achieved. Is it better to buy a single ad that generates 5 seconds of attention, 5 ads that generate 1 second of attention each, or 10 ads that deliver half a second each?

The analysis of the combined Brand Metrics and Lumen dataset for display ads suggests that it is possible to 'salami-slice' attention too thinly to be effective.

The indicates that the middle option is the best: multiple ad impressions of one or more seconds, adding up to 2-5 seconds in aggregate, show the strongest performance.

Attention and Frequency

If you only have a single impression, you need quite high levels of attention to see a lift

But multiple impressions with very low attention doesn't drive result

Two impressions at fairly low attention can begin to have impact

Strongest effects occur as both frequency and attention build

Total attentive seconds across all impressions

Viewable frequency	0 – 0.5	0.5 – 1	1 – 1.5	1.5 – 2	2 – 3	3 – 5	5+
1	-1.6%	-1.3%	-1.8%	-1.4%	-1.5%	-0.5%	
2	-1.4%	0.5%	0.3%	-0.1%	-0.1%	-0.1%	0.3%
3	-1.6%	0.6%	1.5%	1.1%	0.9%	0.8%	1.3%
4	-3.0%	0.7%	2.0%	3.1%	2.2%	2.4%	1.7%
5	-1.2%	-0.3%	2.6%	2.2%	2.9%	2.8%	2.7%

Awareness

% points difference in brand score, relative to all those exposed to the campaign

12

The grid above demonstrates the reasons for this.

- The top row of data shows the % difference in brand score driven by a single impression, relative to all those exposed to the campaign. If you only have a single impression, it is hard to achieve high levels of attention in the first place, and even if successful, changes in overall brand lift are rare.
- The first column shows a different challenge. If you have multiple ads, but each gets a very small amount of attention, then changes in brand lift are also very hard to achieve.
- The strongest movements in brand lift are seen when people look at multiple ads, and each ad is engaged with for long enough to make a difference.

These effects are even clearer when split by the four outcomes reported by Brand Metrics. There seems to be some evidence that engaging with a single ad for a significant amount of time may impact action intent, most measures only change significantly when people engage with multiple impressions for a 'good enough' amount of time.

06

Two different strategies to maximise the Value of Attention

The analysis presented so far conclusively proves that campaigns that generate more attention drive greater increases in brand awareness, consideration, preference and action intent. This attention can be obtained via a single ad that generate a long period of attention, or via multiple ads that each generate 'good enough' attention.

However, this creates a problem for media buyers. Sure, more attention is better. But more attention also costs more - either because they will have to pay for larger and more engaging ad formats that generate high levels of attention, or buy multiple smaller ad units.

It is therefore essential to add in the dimension of cost.

Note on the Cost of Attention

We do not have access to the cost per thousand (CPM) rates for the 9087 campaigns analysed in this study. But, thanks to Lumen's LAMP system, we have billions of lines of data on the average cost of attention for different display ad units.

This gives us a good idea of what a standard market price for ads generating different levels of attention might be. We have applied this insight to Brand Metrics' data to understand the cheapest way of generating significant increases in their four objectives.

Attention and Frequency

Viewable frequency	Awareness: 0 – 0.5	Awareness: 0.5 – 1	Awareness: 1 – 1.5	Awareness: 1.5 – 2	Awareness: 2 – 3	Awareness: 3 – 5	Awareness: 5+	Consideration: 0 – 0.5	Consideration: 0.5 – 1	Consideration: 1 – 1.5	Consideration: 1.5 – 2	Consideration: 2 – 3	Consideration: 3 – 5	Consideration: 5+	Preference: 0 – 0.5	Preference: 0.5 – 1	Preference: 1 – 1.5	Preference: 1.5 – 2	Preference: 2 – 3	Preference: 3 – 5	Preference: 5+	Action Intent: 0 – 0.5	Action Intent: 0.5 – 1	Action Intent: 1 – 1.5	Action Intent: 1.5 – 2	Action Intent: 2 – 3	Action Intent: 3 – 5	Action Intent: 5+
1	-1.6%	-1.3%	-1.8%	-1.4%	-1.5%	-0.5%		-1.4%	-0.9%	-1.3%	-1.0%	-1.0%	-0.6%		-1.0%	-0.5%	-0.9%	-0.6%	-0.6%	0.0%		-0.5%	-0.3%	-0.5%	-0.3%	-0.4%	0.4%	
2	-1.4%	0.5%	0.3%	-0.1%	-0.1%	-0.1%	0.3%	-1.4%	0.8%	0.3%	0.0%	0.0%	0.0%	0.8%	-1.1%	0.5%	0.1%	0.0%	0.1%	0.3%	0.9%	-0.7%	0.2%	0.2%	-0.1%	0.1%	0.3%	0.5%
3	-1.6%	0.6%	1.5%	1.1%	0.9%	0.8%	1.3%	-1.8%	0.6%	1.5%	1.1%	0.6%	1.0%	1.0%	-1.3%	0.5%	0.9%	0.8%	0.3%	0.6%	0.6%	-0.8%	0.4%	0.6%	0.4%	0.3%	0.4%	0.4%
4	-3.0%	0.7%	2.0%	3.1%	2.2%	2.4%	1.7%	-3.0%	0.8%	1.9%	2.6%	2.1%	2.0%	1.5%	-1.9%	0.3%	1.5%	1.6%	1.5%	1.5%	1.3%	-1.6%	0.1%	0.7%	1.1%	1.1%	1.1%	0.7%
5	-1.2%	-0.3%	2.6%	2.2%	2.9%	2.8%	2.7%	-2.4%	-1.4%	2.2%	2.7%	2.9%	2.2%	2.1%	-1.1%	-1.1%	1.2%	1.6%	2.2%	1.8%	1.8%	-0.3%	-0.7%	0.6%	0.9%	1.1%	1.1%	1.1%

Total attentive seconds across all impressions

% points difference in brand score, relative to all those exposed to the campaign

The analysis suggests two different strategies:

Strategy 01:

Awareness and Consideration - multiple hits of 'good enough' attention

When a brand's objective is to raise awareness or build consideration, it looks like the most cost-effective way of buying attention is to buy multiple short spots of attention that build up to a greater whole. You still need to attain a significant amount of aggregate attention, but spreading this across multiple impressions balances cost and impact.

Strategy 02:

Preference and Action Intent - one big shot of attention

While the 'multiple hits' approach works for Preference and Action Intent , there is a second approach that also appears to work well - buying a single ad that gets a lot of attention.

It's easy to come up with theories for why these two approaches might work. Much 'awareness' and 'consideration' advertising is intended to remind people of brands and products that they already know.

Successfully triggering existing memories requires much less attention than creating new memories or getting someone to consider something more deeply.

At the other end of the spectrum, the relatively long attention times of 'preference'- or 'action intent'-directed ads also makes sense. These types of ads may require more significant levels of attention to 'work'.

Much more work - both analytical and experimental - will be required to test and validate these hypotheses, but they point to an important new way to buy the 'right' level of attention to achieve upper funnel objectives.

Consilience with Other Studies

It is interesting to note that these findings are consilient with learnings made by other attention researchers.

01

Firstly, the impact of quite small levels of attention on brand and persuasion scores tallies well with the findings made by Robert Zajonc in the 1960s and Robert Bornstein in the 1980s on the 'mere exposure' effect. Both researchers have found that messages can be communicated, memories formed, and positive effect generated by quite low levels of attention - if repeated frequently.

The Brand Metrics/Lumen research builds on these insights and points the way to quantifying quite how 'mere' exposure can be before it has no effect at all.

02

Secondly, the research echoes the findings made by Erik du Plessis over 30 years of analysis of the impact of South African TV campaigns. The learnings, which were publicised in his seminal The Advertised Mind (2005), suggested that, because people are so good at ignoring advertising, brands should aim to buy TV ads at 3+ frequency to achieve 1+ 'effective' coverage. He also suggested that it was only through repetition and reinforcement of messages that new memories could be formed effectively or efficiently.

These learnings, which are limited to digital display advertising, go some way to support du Plessis's general thesis on the importance of repetition in driving both 'effective' coverage and efficient communication. Future investigations of video advertising by Brand Metrics and Lumen are required to confirm his findings about media such as TV and BVOD.

03

The OOH industry has known for years that frequency is essential for building business impact. Recent research conducted by Kinetic demonstrated the aggregate effect of attention to posters on memory and purchase intent, which seems to work in a similar fashion to digital display advertising.

04

Finally, Dr Karen Nelson-Field of Amplified Research has investigated the minimum attention times required to see shifts in memory and purchase intent. Dr Nelson-Field's work has concentrated mainly on video advertising, where she has found that 2.5 seconds of attention is a useful 'threshold' for advertisers to aim for.

This research supplements and extends these findings for display advertising, suggesting that 2.5 seconds of aggregate attention across multiple ad impressions is required to drive significant outcomes.

It will be interesting to see if these patterns hold true for video formats, which will be the subject of subsequent analyses from Lumen and Brand Metrics.

Conclusion

This is the first study that directly connects brand outcomes with attention based on both attention models powered by eye-tracking data and survey data connected to first-party data and streamlined questionnaires.

By analysing these results at scale, Havas, Lumen, and Brand Metrics have established five major takeaways:

01 Attention correlates to all brand outcomes - but different objectives require different levels of attention

Increases in attention positively impact awareness, consideration, preference and purchase or action intent

Key Takeaway: Embed attention metrics within planning and buying tools to optimise media buying

02 Attention time is a key driver of brand outcome success

- Shifts in brand lift measures are a function of attention time rather than mere noticeability
- Attention time can be accurately estimated from typical viewability metrics

Key Takeaway: Work with attention partners who can provide both % chance of viewing and attention time data, but remember the 'cost of attention' as well as the 'outcomes of attention' to buy the 'right' level of attention to drive value

03 Aggregate attention time is key unit of analysis

- Advertisers need to move beyond an atomistic view of attention per impression to calculate the attention generated by a burst of impressions

Key Takeaway: Work directly with publisher/platform partners who can provide the required frequency to achieve the attention time correlated with the desired results

04 Take frequency seriously

- Given people's ability to avoid or ignore viewable advertising, increased frequency is required to drive 'attentive reach'. To achieve 1+ coverage, remember that you may require 3+ reach
- Frequency is also required to deliver the higher levels of aggregate attention that are necessary to affect changes in brand awareness, consideration, preference and purchase intent

Key Takeaway: Investigate the most effective frequency for your brand and objective rather than assuming that reach = coverage.

05 Buy multiple 'good enough' ads - or one big blast

- Initial analysis linking the 'cost of attention' to the 'outcomes of attention' suggests two different buying approaches

Key Takeaway: For Awareness/ Consideration objectives, buy multiple 'good enough' ads but for Preference/Action Intent, consider investing in single-shot high attention units

Next Steps & Future Learnings

While Lumen and Brand Metrics are confident in the validity of the findings we have made, there are number of limitations to this study that will need to be addressed in future research:

01. Video advertising

- To keep things simple and manageable, Lumen and Brand Metrics have opted to restrict our investigations to display advertising. However, the vast majority of ad spend, even on publisher sites, is video-based.
- The relationship between aggregate attention and outcomes will need to be addressed in subsequent analysis from Lumen and Brand Metrics

02. Impact of context

- This research has made use of the Brand Metrics database at a very general level, and we have not isolated the impact on attention and recall on the 'quality' of context, the subject matter of the accompanying content, the contextual relevance of content and advertising, and many other contextual factors

03. Impact of targeting

- Brand Metrics does not hold any PII or targeting information on the individuals that have been exposed to advertising or answered their simple questionnaire. However, the publishers with whom they work may have access to this fully-consented 'first party' data, and may wish to conduct analyses of the attention/memory impact of successfully targeted advertising on their sites

04. Impact of creative

- In this research, Lumen and Brand Metrics have only been able to analyse the estimated impact of media characteristics on Brand Lift outcomes. However, we are aware of the power of creative design to gain attention in general and to turn that attention into recall with different levels of efficiency. In a sense, we have analysed the impact of the 'box' on the screen, without considering what is 'inside' that box.
- To a certain extent, we can infer the power of the creative 'inside' the box by looking at how the results for an individual ad diverge from the norm. This may reveal important insights into the 'attentional efficiency' of different designs and creative strategies.
- However, we believe it will be necessary to conduct additional primary research to understand the attentional impact of creative to be able to isolate the impact of the 'box' from what is 'inside' the box.

05. Impact of length and intensity of campaign

- While this analysis has shown the impact of aggregate attention in general, important questions remain as to how this aggregate is constructed. This level of analysis is currently missing from this report.
- Is it more efficient to serve five ads on the same day, or spread them out over a week, or over a month? Should they all be shown in a sequential burst or is it better to pepper a reader with a variety of miscellaneous ads? Is a 'burst and drip' strategy more effective than a 'regular pacing' approach?
- We imagine that some of the most important and most actionable insights will come from deeper investigation of these questions in the future.

06. Attention stock': memory decay rate

- Just as advertising campaigns run over many days and weeks, so too do brand lift studies. There can be great variation in the length of time between ad exposure and survey response. In one sense, this phenomenon can be classed as a confounding variable for this analysis, as we have not taken into account the variety in the gap between seeing an ad and recalling the ad within our dataset.
- However, in another sense, this variety provides an interesting opportunity for future research. What is the decay rate in attention to recall over time? Could this be represented as an 'Attention Stock', similar to the way TV buying made use of the concept of Ad Stock? This will be an important avenue for Lumen and Brand Metrics to investigate in future analysis.

Thank you!